DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-027742
Date Inspected: 07-Jun-2012

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1730
Location: Job Site

CWI Name:	As noted below			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: SAS OBG

Summary of Items Observed:

Quality Assurance Inspector (QA) Douglas Frey was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

Orthotropic Box Girder (OBG) section: The QC Documents observed being used by this QA Inspector for the following weld joints appeared to be designated as Seismic Performance Critical Members (SPCM).

13E PP121.5-E2.5-BF1 (Interior)

This QA Inspector observed ABF welder Edward Brown commence welding operations on 13E PP121.5-E2.5-BF1 prior to approval. This QA Inspector submitted a TL-15 dated 6/2/2012 for excessive root opening and is pending. This QA Inspector generated a TL-15 on this date for welding prior to approval. This QA Inspector made random observations of ABF welder Edward Brown (ID 9331) performing Shielded Metal Arc Welding (SMAW) in the 2F horizontal position on the Beam Flange joint of 13E PP121.5-E2.5-BF1 on the interior of the OBG. The welder was observed pre-heating the Joint by use of a torch to the minimum required temperature. QC Inspector Salvador Merino verified that the welding parameters (Amps and Travel Speed) were in accordance with ABF-WPS-D1.5-F1200A. The welder was observed grinding and blending the start/stop edges of the work utilizing a small disc grinder and compressed air in between passes as QC measured the inter-pass temperatures. At the time of the observations no issues were noted by the QA. On subsequent observations throughout the shift to monitor quality, it was noted that the work was completed on this date.

13E/14E-A1 (Interior)

This QA inspector randomly observed ABF welder Richard Garcia (ID 5892) perform SMAW on the overhead section of 13E/14E-A.1 on the interior of the OBG. The welder was observed welding in the 4G overhead position using E7018-H4R electrodes drawing amperage of 132. This QA Inspector observed QC Inspector Sal Merino verify prior to the start of welding operations, that the minimum preheat temperature as per the approved WPS was established; and afterwords verified that the welding parameters (Amps and Travel Speed) were in accordance with ABF-WPS-D1.5-1030. The welder was observed grinding and blending the start/stop edges of the work utilizing a small disc grinder and compressed air in between passes. This QA Inspector noted that the 3.2mm electrodes were stored in electrically heated, thermostatically controlled oven after removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter to measure the electrical welding parameters and Tempilstik Heat Indicators for verifying the preheat and inter-pass temperatures. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the work at this location was completed on this date and appeared to be in general conformance with the contract specifications.

13E PP124.5-E2.2-BW1/BF1 (Interior)

This QA Inspector made random observations of ABF welder Rick Clayborn (ID 2773) utilize the Carbon Arc Gouging (CAG) process to back gouge the root side of the Web joint and the Flange joint from 13E PP124.5-E2. 2-BW1/BF1 on the interior of the OBG. This QA Inspector noted that ABF welder Khit Lounechaney had completed face “A” of these welds on 6/6/2012. The welder was observed removing metal from the root side of the weld and upon completion, QC Inspector Salvador Merino performed Magnetic Particle Inspection of the site to ensure soundness of the metal. It was noted that QC found no rejectable indications at the time of testing and the work at this location appeared to be in general conformance with the contract specifications.

13E PP123-E2.8-BF3 (Interior)

This QA Inspector made random observations of ABF welder Steven Davis performing SMAW in the 2G horizontal position on the Flange joint of 13E PP123-E2.8-BF3 (Beam Flange) on the interior of the OBG. This QA Inspector observed QC Inspector Sal Merino verify prior to the start of welding operations, that the minimum preheat temperature as per the approved WPS was established; and verified that the welding parameters (Amps and Travel Speed) were in accordance with ABF-WPS-D1.5-1030. QC Inspector Salvador Merino performed MT Inspection on the back gouged site to determine soundness of the metal and verified that no relevant indications were noted. This QA Inspector randomly observed welder Steven Davis commence welding operations on Face “B” of the joint through completion during the remainder of the shift. This QA Inspector noted that the work at this location was completed on this date and appeared to be in general conformance with the contract specifications.

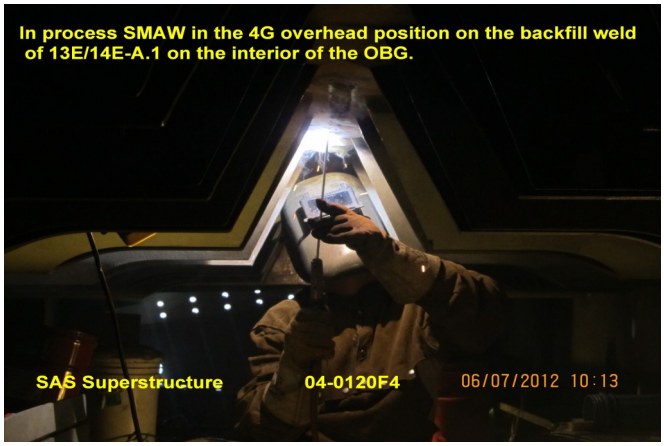
13E PP124-E2.2-BF1 (Interior)

This QA Inspector made random observations of ABF welder Khit Lounechaney (ID 4985) performing the SMAW Process in the 2G horizontal position utilizing E7018-H4R electrodes on the Flange weld joint at 13E

PP124-E2.2-BF1. QC Inspector Salvador Merino verified the temperature and recorded the parameters as acceptable and within the requirements of ABF-WPS-D1.5-1030. The welder was observed installing run off tabs and began welding on the joint followed by grinding and blending, utilizing a small disc grinder. On a subsequent observation, this QA Inspector noted that the ongoing production welding was performed in the horizontal position utilizing the E7018-H4R low hydrogen electrodes. The 3.2mm electrodes were stored in electrically heated, thermostatically controlled oven after removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter to measure the electrical welding parameters and Tempilstik Heat Indicators for verifying the preheat and inter-pass temperatures. At the time of the observation no issues were noted by the QA. On subsequent observations throughout the shift to monitor quality, it was noted that the work was in progress and appeared to be in general conformance with the contract documents.

Summary of Conversations:

This QA Inspector discussed welder assignments and locations in the Drop-In panels with QC Inspector Salvador Merino.



Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910 , who represents the Office of Structural Materials for your project.

Inspected By:	Frey,Doug	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer